

**AMENDMENTS TO THE DRAWINGS**

As provided in the attached Replacement Drawings, please delete the reference numbers  
“105,” “106,” “203,” and “204.”

**REMARKS**

The Office Action dated January 12, 2006 has been carefully considered. Claims 1-37 are pending. The above amendments and the following remarks are presented in a sincere attempt to place this Application in condition for allowance. Claim 1 has been amended in this Response. Claims 7-16, 19-23 and 31-37 have been withdrawn from consideration. Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

The drawings stand objected to as failing to comply with 37 C.F.R. § 1.84(p)(5) because they include reference characters that are not mentioned in the description. Accordingly, Applicants have deleted the reference numerals “105,” “106,” “203” and “204” from the drawings as shown in the attached “Replacement Sheet.” In addition, the descriptions of reference numerals “105” and “203” have been deleted from the Specification. Accordingly, Applicants respectfully submit that the “Replacement Sheet” does comply with 37 C.F.R. § 1.84(p)(5).

Claim 1 has been amended to describe “a substrate, wherein *the substrate* is at least configured to support the switch.” Applicants contend that the rationale underlying this amendment bears no more than a tangential relation to any equivalence in question because original Claim 1 merely contained a typographical error. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 122 S.Ct. 1831 (2002).

Claims 1-2, 6, 17-18, 24-26 and 30 stand rejected under 35 U.S.C. § 102(e) in view of U.S. Patent 6,529,093 to Ma (“Ma”). Insofar as these rejections may be applied against the amended claims they are deemed overcome.

Claim 1 comprises a distinguishing feature of the present invention. The apparatus of Claim 1 comprises “at least one tether, wherein the at least one tether is at least configured to be attached to the substrate and attached to the conductive beam.” Support for this feature of Claim 1 can be

found, among other places, Fig. 1 and page 7, line 18 through page 8, line 6 of the original Application.

The Ma reference does not suggest, teach, or disclose this feature of the present invention. Specifically, Ma discloses a microelectromechanical (“MEMS”) switch that comprises a cantilever beam having a proximal end and a distal end. The cantilever beam is supported by its proximal end above a substrate through the use of a raised anchor. Accordingly, the proximal end of the cantilever beam is attached to the raised anchor and the distal end of the cantilever beam is not attached to the substrate in an “OFF” position. In contrast to Ma, the apparatus of Claim 1 comprises a tether. The claimed invention describes “a conductive beam, wherein the conductive beam is at least configured to be suspended with one free end.” This conductive beam of Claim 1 is similar to the cantilever beam of Ma, but in the claimed invention “at least one tether is at least configured to be attached to the substrate and attached to the conductive beam.” This tether of Claim 1 is shown by reference numeral 107 of Fig. 1. Accordingly, Ma does not disclose a tether attached to the substrate and to the conductive beam.

The Examiner states that reference numeral 513 of Ma is a tether, but Ma describes reference numeral 513 as an anchor. As provided by MPEP § 2111.01, “claim terms are presumed to have the ordinary and customary meanings attributed to them by those of ordinary skill in the art.” Accordingly, an anchor is clearly distinct from a tether. The anchor of Ma (513) is designed to hold the proximal end of the cantilever beam in place, wherein a tether is designed to allow restricted movement. As described in the present Application, the tether 107 prevents the conductive beam from curling up and also provides a gap limit for the conductive beam. The tether 107 prevents the distal end of the conductive beam from moving in an upward direction without preventing the movement of the conductive beam in other directions. The anchor of Ma does not

provide these attributes and cannot be considered a tether. Therefore, it is clear that the anchor of Ma is not a tether as is claimed in Claim 1.

In addition, the present Application describes a component that is similar to the anchor of Ma. The reference numeral 102 is described as a “mechanical post” in the present Application and it serves the same mechanical function as the anchor of Ma. Therefore, it is clear that the tether of Claim 1 is not an anchor as stated by the Examiner.

In view of the foregoing, it is apparent that the cited reference does not disclose, teach, or suggest the unique combination recited in Claim 1. Applicants therefore submit that Claim 1 is both clearly and precisely distinguishable over the cited reference in a patentable sense. Accordingly, Applicants respectfully request that the rejection of Claim 1 under 35 U.S.C. § 102(e) in view of Ma be withdrawn and that Claim 1 be allowed.

Claim 17 comprises a distinguishing feature of the present invention. Specifically, Claim 17 describes a method of operation comprising “preventing of warping of a flexible beam that is configured to at least operate as a throw arm once the temperature-independent microscopic switch is engaged.” As previously described with reference to Claim 1, the anchor of Ma cannot prevent the warping of the flexible beam or conductive beam. A tether or throw arm in the present application prevents the warping of the flexible beam by limiting its upward movement. In Ma the cantilever warps because there is no component to limit the upward movement of the cantilever. Claim 24 describes a MEMS switch comprising “a tether having at least two ends, wherein the first end is coupled to the substrate and the second end is coupled to the cantilever.” As previously described with reference to Claim 1, the anchor of Ma is not a tether. Hence, for at least the aforementioned reasons that Claim 1 is deemed to be allowable, Claims 17 and 24 should be

deemed to be allowable. Applicants respectfully request that the rejections of Claims 17 and 24 under 35 U.S.C. § 102(e) in view of Ma also be withdrawn.

Claims 2 and 6 depend upon and further limit Claim 1. Claim 18 depends upon and further limits Claim 17. Claims 25-26 and 30 depend upon and further limit Claim 24. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejections of dependent Claims 2, 6, 18, 25-26 and 30 also be withdrawn.

Claims 1-3 and 24-27 stand rejected under 35 U.S.C. § 102(e) in view of U.S. Patent 6,529,093 to Nelson ("Nelson"). Insofar as these rejections may be applied against the amended claims they are deemed overcome.

Claim 1 comprises a distinguishing feature of the present invention. The apparatus of Claim 1 comprises "at least one tether, wherein the at least one tether is at least configured to be attached to the substrate and attached to the conductive beam." Support for the at least one tether of Claim 1 can be found, among other places, Fig. 1 and page 7, line 18 through page 8, line 6 of the original Application.

The Nelson reference does not suggest, teach, or disclose this feature of the present invention. Specifically, Nelson discloses a device that is designed to electrostatically pull a cantilever beam away from a conductive pad. The cantilever beam is supported by its proximal end above a substrate by a support structure. Accordingly, the proximal end of the cantilever beam is attached to the support structure and the distal end of the cantilever beam is not attached to the substrate in a non-actuated state. In contrast to Nelson, the apparatus of Claim 1 comprises a tether. The claimed invention describes "a conductive beam, wherein the conductive beam is at least configured to be suspended with one free end." This conductive beam of Claim 1 is similar to the

cantilever beam of Nelson, but in the claimed invention “at least one tether is at least configured to be attached to the substrate and attached to the conductive beam.” The tether of Claim 1 is shown by reference numeral 107 of Fig. 1. Accordingly, Nelson does not disclose a tether attached to the substrate and to the conductive beam.

The Examiner states that reference numeral 34 of Nelson is a tether, but Nelson describes reference numeral 34 as a support structure for the cantilever. As provided by MPEP § 2111.01, “claim terms are presumed to have the ordinary and customary meanings attributed to them by those of ordinary skill in the art.” Accordingly, a support structure is clearly distinct from a tether. The support structure of Ma (34) is designed to hold the proximal end of the cantilever beam in place, wherein a tether is designed to allow restricted movement. As described in the present Application, the tether 107 prevents the conductive beam from curling up and also provides a gap limit for the conductive beam. The tether 107 prevents the distal end of the conductive beam from moving in an upward direction without preventing the movement of the conductive beam in other directions. The support structure of Nelson does not provide these attributes of a tether. Therefore, it is clear that the anchor of Nelson is not a tether as is claimed in Claim 1.

In addition, the present Application describes a component that is similar to the support structure of Nelson. The reference numeral 102 is described as a “mechanical post” in the present Application and it serves the same mechanical function as the support structure of Nelson. Therefore, it is clear that the tether of Claim 1 is not the support structure shown in Nelson as stated by the Examiner.

In view of the foregoing, it is apparent that the cited reference does not disclose, teach, or suggest the unique combination recited in Claim 1. Applicants therefore submit that Claim 1 is both clearly and precisely distinguishable over the cited reference in a patentable sense. Accordingly,

Applicants respectfully request that the rejection of Claim 1 under 35 U.S.C. § 102(e) in view of Nelson be withdrawn and that Claim 1 be allowed.

Claim 24 describes a MEMS switch comprising “a tether having at least two ends, wherein the first end is coupled to the substrate and the second end is coupled to the cantilever.” As previously described with reference to Claim 1, the support structure of Nelson is not a tether. Hence, for at least the aforementioned reasons that Claim 1 is deemed to be allowable, Claim 24 should be deemed to be allowable. Applicants respectfully request that the rejection of Claim 24 also be withdrawn.

Claims 2 and 3 depend upon and further limit Claim 1. Claims 25-27 depend upon and further limit Claim 24. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejections of dependent Claims 2-3 and 25-27 also be withdrawn.

Claims 4-5 and 28-29 stand rejected under 35 U.S.C. § 103(a) in view of Ma and U.S. Patent 6,876,482 to DeReus (“DeReus”). Insofar as these rejections may be applied against the amended claims they are deemed overcome. Claims 4 and 5 depend upon and further limit Claim 1. Claims 28-29 depend upon and further limit Claim 24. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejections of dependent Claims 4-5 and 28-29 also be withdrawn.

Applicants have now made an earnest attempt to place this Application in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request full allowance of Claims 1-6, 17-18, and 24-30.

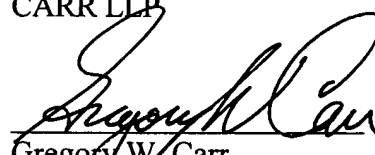
Applicants do not believe that any fees are due; however, in the event that any fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and

to credit any overpayment made, in connection with the filing of this paper to Deposit Account No.  
50-0605 of CARR LLP.

Should the Examiner deem that any further amendment is desirable to place this  
Application in condition for allowance, the Examiner is invited to telephone the undersigned at  
the number listed below.

Respectfully submitted,

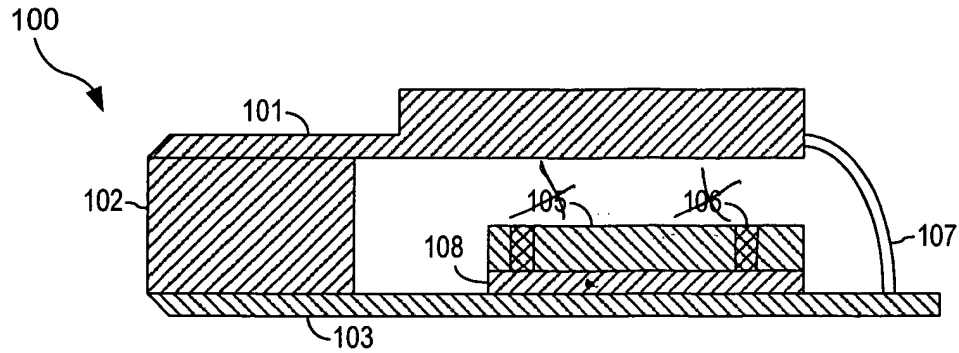
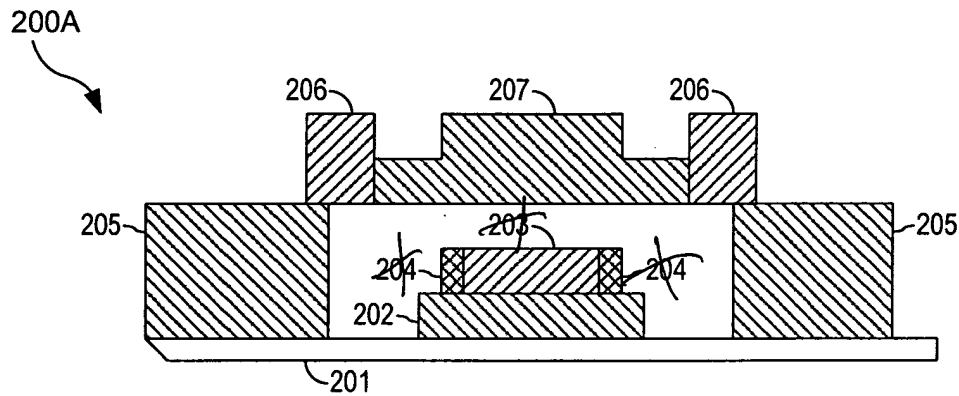
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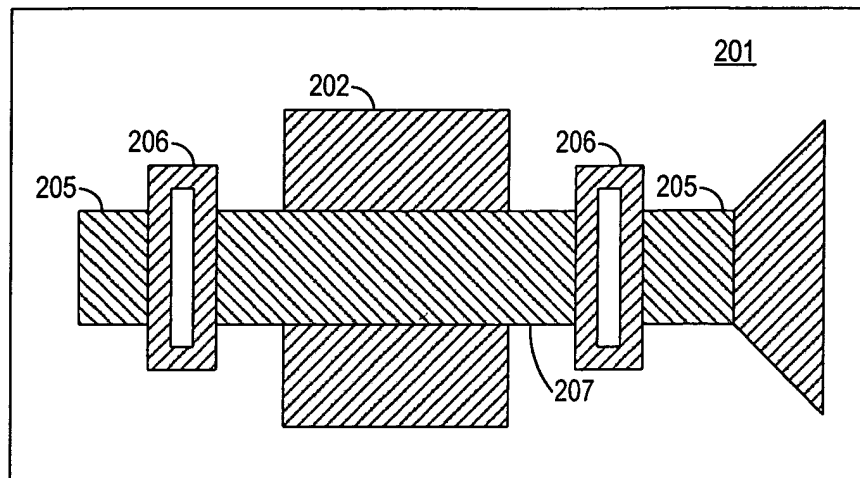
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**FIG. 1****FIG. 2A**

200B

**FIG. 2B**